

EPI Update for Friday, August 28, 2015

Center for Acute Disease Epidemiology (CADE)

Iowa Department of Public Health (IDPH)

Items for this week's EPI Update include:

- **No cases of Ebola currently in Sierra Leone**
- **Mosquitoes still a threat – first Iowa case of JCV confirmed**
- **Vomiting machine demonstrates norovirus spread via aerosolization**
- **Problem gambling treatment is available, effective**
- **Increase in plague cases in western U.S., 2015**
- **New influenza and vector-borne epidemiologist in CADE**
- **Meeting announcements and training opportunities**

No cases of Ebola currently in Sierra Leone

For the first time in more than a year, there are no new or ongoing Ebola cases in Sierra Leone. This is an important step toward the country being declared Ebola-free; this will occur once the country has gone two incubation periods (42 days) without a case. Travelers to the U.S. from Sierra Leone and Guinea will continue to be screened and monitored for Ebola. Since Liberia was declared Ebola-free, travelers from Liberia have been screened for symptoms, but have not been actively monitored by public health. Since September 1, 2014, IDPH and local health departments around the state have monitored a total of 119 travelers from the three affected countries. Six individuals are currently being monitored in Iowa. No cases of Ebola have been reported in Iowa.

For more information about Ebola in Sierra Leone, visit www.who.int/features/2015/ebola-end-sierra-leone/en/. For more information about travelers being monitored in Iowa, visit [www.idph.state.ia.us/EHI/Issue.aspx?issue=Ebola Outbreak&pg=Status Updates](http://www.idph.state.ia.us/EHI/Issue.aspx?issue=Ebola%20Outbreak&pg=Status%20Updates).

Mosquitoes still a threat – first Iowa case of JCV confirmed

IDPH has received confirmation of two West Nile virus cases so far this summer, with investigation pending on another suspected case. In addition, the first Iowa case of Jamestown Canyon Virus (JCV) has been confirmed. JCV is a rare, mosquito-borne viral encephalitis (and a cousin to La Crosse encephalitis virus), with only a few cases reported annually in the U.S. This is the first case of JCV ever reported in Iowa, though the neighboring states of Minnesota and Wisconsin have reported cases. For more information, visit www.idph.state.ia.us/IdphNews/Reader.aspx?id=C72C866A-0FD0-4641-8A70-1830F0157B83

Vomiting machine demonstrates norovirus spread via aerosolization

Researchers have created a “simulated vomiting device” to demonstrate the aerosolization and spread of norovirus during vomiting events (and no, we are not kidding).

The device, built to one-quarter scale, vomits bacteriophage (a safer alternative than norovirus) into a chamber with varying pressures. Aerosolized virus is collected inside the chamber and measured. The study found that relatively small amounts of virus are aerosolized during a vomiting event, but are more than enough to cause nearby people to be infected, primarily because of the extremely small infectious dose of norovirus.

For more information about this study, visit journals.plos.org/plosone/article?id=10.1371/journal.pone.0134277.

Problem gambling treatment is available, effective

Over 75 percent of Iowans have gambled within the past 12 months, and 16 percent of Iowans report at least one symptom associated with problem gambling during the past year. Nearly one in three Iowans know someone with financial, physical, or emotional problems caused by gambling.

IDPH contracts with local agencies to provide problem gambling prevention, treatment, and recovery. Services include counseling, education/prevention, helpline referral, and training/professional development. Clients who complete treatment gamble significantly less often in the month following discharge and 92 percent report reduced gambling disorder criteria than before admission to treatment.

For more information about Iowa gambling treatment outcomes, visit www.idph.state.ia.us/IGTP/common/pdf/reports/igto_2015_report.pdf.

Increase in plague cases in western U.S., 2015

Since April 1, 11 cases of plague have been reported in the U.S. All were exposed in the Western U.S. From 2001-2012, the median number of cases reported annually in the U.S. was three. It is still unclear why an increased number of cases have occurred this year. Plague circulates among wild rodents and their fleas in the western U.S. Person-to-person spread of plague is very rare.

Symptoms of plague include sudden onset of fever and malaise, often accompanied by abdominal pain, nausea, and vomiting. The illness varies by route of infection. Most cases of plague are bubonic, characterized by swelling of lymph nodes near the site of the flea bite (these are called buboes – thus the name “bubonic plague”). Septicemic plague is less common. Pneumonic plague is the least common, and is characterized

by fulminant primary pneumonia; this is the most common type to spread from person-to-person or from domestic animal-(such as a cat)-to-person. Untreated, the mortality rate for plague is up to 93 percent, but is reduced to 16 percent with prompt antibiotic treatment.

Plague has not been reported in Iowa. Ecological conditions in Iowa are such that it is very unlikely that the plague bacteria circulates in Iowa's wild rodent populations or their fleas; however, plague should be considered in travelers with consistent symptoms and recent travel to the western U.S., as well as to parts of South America, Asia and Africa. For more information about plague in the U.S. in 2015, visit www.cdc.gov/mmwr/preview/mmwrhtml/mm64e0825a1.htm?s_cid=mm64e0825a1_e.

New influenza and vector-borne epidemiologist in CADE

We are pleased to introduce Julie Coughlin as our new influenza and vector-borne epidemiologist in CADE. Julie completed her undergraduate education at Drake and received her Master of Public Health in Epidemiology from the University of Iowa. She previously worked for the University of Iowa for eight years. Welcome, Julie!

Meeting announcements and training opportunities

None

Have a healthy and happy week!

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